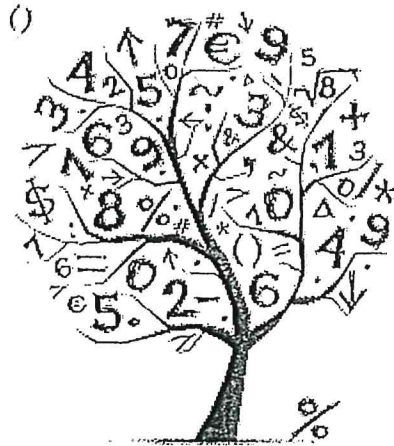


SUMMER MATH FOR STUDENTS ENTERING SIXTH GRADE



Dear Parents and Guardians,

To help students retain math concepts and skills learned this school year, a summer math packet has been created for your child. The packet contains practice that will review, maintain, and reinforce the skills and concepts introduced, developed, or mastered during the school year. Parent participation to review the student's work is encouraged. Please initial the bottom of each page that you review with your child. The summer math packet is to be completed throughout the summer. It is not meant to be completed before school is out this year or just before school starts in the fall. Students will benefit from completing the packet a bit at a time. Please have your child turn in the math packet to the homeroom teacher or math teacher during the first full week of school in the fall.

Students should also visit MobyMax regularly throughout the summer to work on lessons that support individual student learning. MobyMax will find and help resolve learning gaps with adaptive differentiated instruction. This will help them to be MATHTASTIC!

Have a blessed, fun and safe summer!

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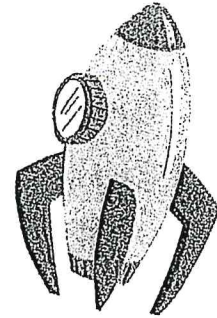
©Performance Task 1

Name _____

Summer Vacation: Year 2995

- 1 Yolanda and her family are voyaging to the edge of the Milky Way for summer vacation. But she still has to do her summer math project! To start the assignment, Yolanda records the distance the spaceship traveled since breakfast.

7,837,927,457 miles



- A. Write the value of each 7. If Yolanda starts with the 7 in the ones place, how could she get numbers equal to the values of the other 7s?

- B. HANK, the family robot, printed some decimals for Yolanda.

Write each in standard form. Then order them from greatest to least.

six hundred eighty-three thousandths

$$(7 \times \frac{1}{10}) + (8 \times \frac{1}{100})$$

$$(6 \times \frac{1}{10}) + (1 \times \frac{1}{100}) + (8 \times \frac{1}{1000})$$

seven hundred eight thousandths

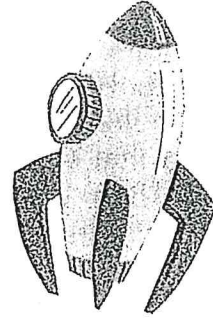
- C. HANK gives Yolanda another task. He asks her to round each decimal in problem B above to the nearest tenth.

Performance Task 1

A Handy Helper

Name _____

- 2 Yolanda's brother George also has to keep up with his summer math project. When George sits down with HANK, the robot prints some incomplete multiplication sentences.



- A. Help George complete the multiplication sentences below. Then describe the pattern. Write the next multiplication sentence in the pattern.

$$30 \times 20 = \underline{\hspace{2cm}}$$

$$3 \underline{\hspace{2cm}} \times 20 = 6,000$$

$$3,000 \times 20 = \underline{\hspace{2cm}}$$

$$3 \underline{\hspace{2cm}} \times 20 = 600,000$$

Yolanda and George's home on Earth has a greenhouse with 68 tomato plants. Last week HANK told the greenhouse computer to give each tomato plant 284 mL of water. This week HANK told the greenhouse computer to give each tomato plant 307 mL of water.

- B. How much water did the tomato plants get in all?

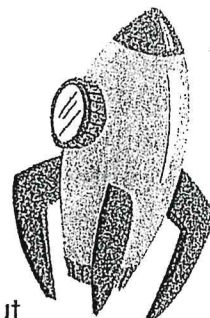
- C. Next week each tomato plant will need 20 mL more than half the water it got this week. Write an expression for the direction HANK might give to the greenhouse computer.

©Performance Task 1

Space Travel Nutrition

Name _____

- 3 A member of the space ship crew checks the supply of fruit snacks. He notices that there are 15,481 fruit snacks left in the holding bin of the ship. Unfortunately, he also sees that space mice have munched on 1,128 of the snacks. There are 47 people on the spaceship. Each person gets one fruit snack each day.



- A. How long can the voyage continue before the space ship runs out of fruit snacks?

Here are some strategies you can use.

- Draw an array.
- Draw an area model.
- Multiply to divide.
- Break apart the dividend.

Twice a day, each of the 47 people on the spaceship takes a vitamin capsule. They also take a mineral capsule at breakfast, lunch, and dinner, however 12 people do not take these mineral capsules.

- B. Write an expression for the total number of capsules taken each day. Evaluate your expression.

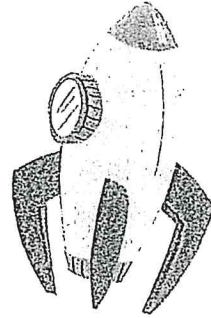
Performance Task 1

Space Hobbies

Name _____

George is working on his miniature magnetic train. The rocket locomotive is $\frac{7}{8}$ inch long. George attaches a meteor car that is $\frac{2}{3}$ inch long. Then he attaches a Martian cattle car that is $\frac{5}{6}$ inch long.

- A. How long is the magnetic train now? Write your answer in simplest form.



Yolanda is making a model of a galaxy worm. The worm's head is $2\frac{1}{2}$ meters long. She decides that is too long, so she cuts $\frac{3}{4}$ meter off. Then Yolanda attaches the worm's tail, which is $3\frac{3}{5}$ meters long.

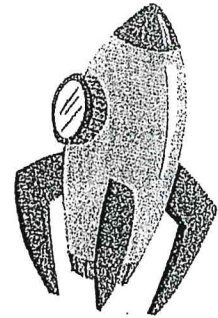
- B. How long is the galaxy worm? Write your answer in simplest form.

©Performance Task 1

Outerspace Activity

Name _____

- 5 The fuel tank on Yolanda's space suit was $\frac{9}{10}$ full. She went on a space walk before lunch and used $\frac{3}{4}$ tank of fuel. At lunch, Yolanda's dad asks how much fuel she had left in her tank. Yolanda thinks a moment before replying, "The tank must be $\frac{3}{5}$ full now."



A. Is Yolanda's answer reasonable? Explain.

George's space scooter has $4\frac{1}{8}$ liters of fuel in its tank. He adds $2\frac{1}{2}$ liters of fuel and takes the scooter for a ride around the spaceship. During the ride, the scooter uses $1\frac{1}{4}$ liters of fuel.

B. How much fuel is left in the tank?

➤ Performance Task 2

Name _____

The Golden Crust Pizzeria

Vincent is a waiter at his family's pizzeria, The Golden Crust. This restaurant is known for its large vegetarian-style rectangular pizzas. It is no surprise that many patrons take home some of their leftover pizza.



- A. The Dozzo family has $\frac{4}{5}$ of the asparagus pizza left over from their dinner. Mr. Dozzo wants to take home $\frac{3}{4}$ of it. Will Vincent give him less than $\frac{4}{5}$ pizza, more than $\frac{4}{5}$ pizza, or $\frac{4}{5}$ pizza? Explain.

- B. Mr. Benvenuto loves the broccoli pizza. There are $1\frac{1}{2}$ broccoli pizzas left from his family's dinner. Mr. Benvenuto tells Vincent he only wants $\frac{2}{3}$ of the broccoli pizzas to take home. How much pizza will Vincent give him?

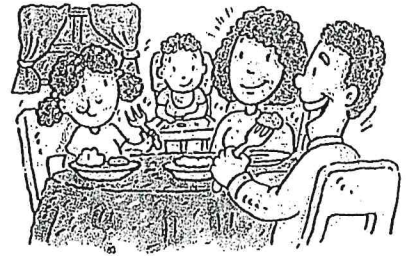
- Draw a diagram.
- Write a multiplication sentence.

Performance Task 2

The Pizza Take Out Counter

Name _____

- 2 Vincent's cousin Terry also works at The Golden Crust. She is usually assigned to the take out counter. Today, one third of the Mediterranean pizza is left. Five coworkers want to buy the remaining Mediterranean pizza. They ask Terry to cut the pizza so they can share it equally.



A. How much pizza will each coworker receive?

- Draw an diagram.
- Write a division sentence.
- Check your answer by multiplying.

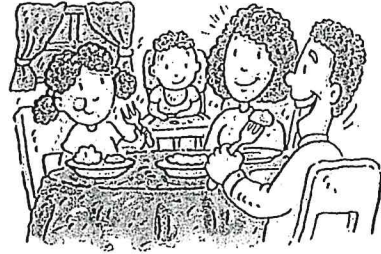
B. Ms. Tucci orders 4 artichoke pizzas for her birthday party. She asks Terry to cut them into $\frac{1}{3}$ pizzas. How many thirds will Ms. Tucci take home?

Performance Task 2

Name _____

A Most Important Ingredient

Vincent gets three packages of fresh mozzarella from the refrigerator. The first package weighs 0.84 pound. The second package weighs 1.37 pounds. The third package lost its label. Vincent weighs the three packages together and finds the total weight is 4.3 pounds.



A. How much does the third package of mozzarella weigh?

Here are some strategies you can use.

- Use ones flats, tenths rods, and hundredths cubes.
- Draw models.
- Use properties of addition.
- Use place value.

Terry is making three pizzas with ricotta cheese. She starts with 2.14 pounds of ricotta. She puts 0.45 pound of ricotta on a large pizza. She puts 0.28 pound of ricotta on a medium pizza. And she puts 0.14 pound of ricotta on a small pizza.

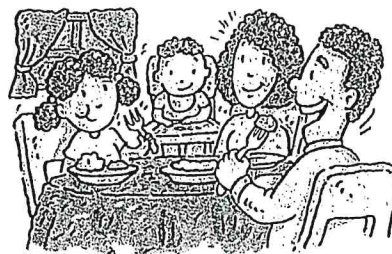
B. Estimate how much ricotta Terry put on the three pizzas. Calculate how much ricotta Terry has left.

Performance Task 2

Name _____

A More Important Ingredient

- 4 Vincent made dough and cut it into 6 pieces to make 6 pizzas. Each piece of dough weighed 0.54 pounds. His dad looked at the scale and said, "That's too light. Each pizza dough should weigh 0.9 pound."



- A. How much more dough does Vincent need to make?

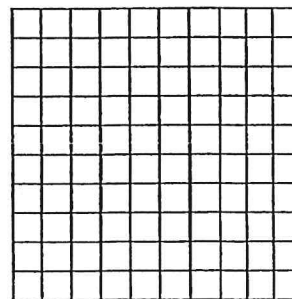
Here are some strategies you can use.

- Use tenths rods and hundredths cubes.
- Draw models.
- Use place value.

Terry is making pizza dough for two small pizzas. The first dough weighs 0.7 pound. The second dough weighs 0.8 times as much as the first dough.

- B. How much does the second dough weigh?

- Use an array.



Performance Task 2
Restaurant Deliveries

Name _____

5 The Golden Crust received a delivery of 212.5 pounds of flour. Terry needs to separate the flour into equal amounts to store it in the basement. Her uncle tells her she can separate the flour into 10, 100, or 1,000 bags.



A. Complete the table below. How much will each bag weigh if Terry puts the flour into 10 bags? 100 bags? 1,000 bags? Describe the pattern in the table.

Total Flour (lb)	$\div 10$	$\div 100$	$\div 1,000$

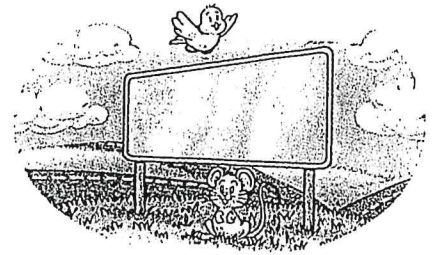
This morning, The Golden Crust received a delivery of 6.86 pounds of mushrooms. The pizza chef said, "That isn't enough mushrooms!" So he called the mushroom distributor and ordered more. In the afternoon, another 30.5 pounds of mushrooms arrived. The chef asks Vincent to separate the mushrooms into 8 equal piles.

B. How much will each pile weigh?

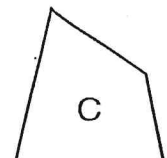
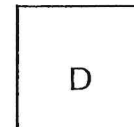
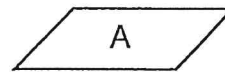
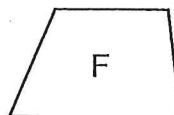
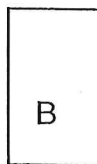
Performance Task 3 **Sorento Signs, Inc.**

Name _____

- 1 Teresa works for Sorento Signs, a family-owned company that makes all kinds of signage for schools, cities, and businesses.



- A. Help Teresa classify the signs below by completing the table and writing the names of the polygons. Then write the letter of each sign in **one** category. Be careful—some signs fit in more than one category!



Polygon	Sides	Angles	Sign
_____	4 sides		_____
_____	just 1 pair of parallel sides		_____
_____	2 pairs of parallel, congruent sides		_____
_____	2 pairs of parallel, congruent sides	4 right angles	_____
_____	2 pairs of parallel sides; all 4 sides congruent		_____
_____	2 pairs of parallel sides; all 4 sides congruent	4 right angles	_____

- B. How else could sign D be classified?

- C. How else could sign E be classified?

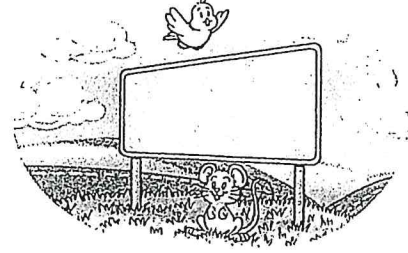
- D. How else could sign F be classified?

Performance Task 3

Painting Signs

Name _____

2. Fred is a sign painter at Sorento Signs. Today he has to paint 3 red signs. The first sign will take 7 pints of paint. The second sign will take 4 quarts of paint. The third sign will take 6 cups of paint. Once Fred knows what paint color, or colors, all the signs will be, he goes to the storage warehouse to get the paint. In this situation, he only needs the color red.



- A. Determine whether Fred should get a 1-gallon can, a 2-gallon can, or a 3-gallon can of red paint from the warehouse.

Think

2 cups = 1 pint

2 pints = 1 quart

4 quarts = 1 gallon

Fred climbs 2.3 meters up a ladder to paint a sign. Then he moves down the ladder 500 millimeters to do some more painting. Finally he climbs 75 centimeters back up the ladder to finish the painting.

- B. How many meters off the ground is Fred when he finishes the painting of this sign?

Think

1 m = 1,000 mm

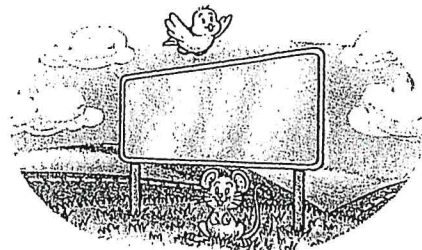
1 m = 100 cm

Performance Task 3

The Area of Signs

Name _____

- 3 Teresa is making a rectangular sign for a health club. The sign will be $\frac{1}{4}$ yard wide and $\frac{4}{5}$ yard long.



- A. Fred tells Teresa he has enough paint to cover $\frac{1}{8}$ square yard of the health club's sign. Will Fred need more paint to complete the painting of this sign? Explain.

Here are some strategies you can use.

- Draw a diagram.
- Use the formula for area.

Think

$$A = \ell \times w$$

Sorento Signs got an additional order from the health club for two more signs. The first sign will be a rectangle that measures $12\frac{1}{2}$ feet long and $4\frac{2}{5}$ feet wide. The second sign will be a square with sides that measure $7\frac{1}{2}$ feet.

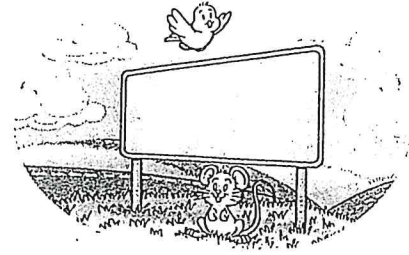
- B. How many square feet will Fred need to paint in all?

Performance Task 3

Unique Designs

Name _____

- 4 Teresa is making a sign for a pet store that specializes in fish. The sign is a clear rectangular prism that looks like an aquarium. The sign has a length of 9 feet, a width of 4 feet, and a height of 6 feet. The sign will be filled with blue foam to look like water.



- A. What is the volume of the sign?

Here are some strategies you can use.

- Draw a diagram and count the unit cubes.
- Use a formula for volume.

Think

$$V = \ell \times w \times h$$

$$V = B \times h$$

A box store orders a sign that will look like three stacked boxes. The bottom box will measure 8 feet long, 6 feet wide, and 4 feet tall. The middle box will measure 5 feet long, 4 feet wide, and 3 feet tall. The top box will measure 3 feet long, 2 feet wide, and 2 feet tall.

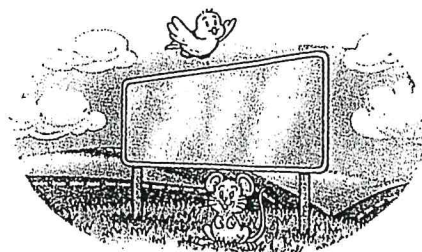
- B. What is the total volume of the sign?

Performance Task 3

Name _____

The Mystery Sign

- 5 Fred is painting a billboard in the city. But his directions are mysterious—he doesn't know what words he will paint! He is given seven sets of ordered pairs, one for each letter on the billboard. For each set, he must locate the points on the billboard. Then he must connect the points to form the letter.



- A. Help Fred paint the billboard. The key is to connect the points of each letter in order. So, each time you locate a new point, connect it to the last point. What kind of company ordered the billboard?

Letter	Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8
1	(1, 7)	(1, 11)	(3, 11)	(3, 9)	(1, 9)	(3, 9)	(3, 7)	(1, 7)
2	(5, 11)	(5, 7)	(7, 7)	(7, 11)				
3	(9, 11)	(10, 9)	(11, 11)	(10, 9)	(10, 7)			
4	(1, 1)	(1, 5)	(3, 1)	(3, 5)				
5	(5, 5)	(5, 1)	(7, 1)	(7, 5)				
6	(9, 5)	(11, 5)	(10, 5)	(10, 1)				
7	(15, 5)	(13, 5)	(13, 3)	(15, 3)	(15, 1)	(13, 1)		

